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## **PENGARUH *VIRGIN COCONUT OIL* (VCO) DI DALAM BASIS KRIM TERHADAP PENETRASI ZAT AKTIF**

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### **ABSTRACT**

A study on formulation of cream in a base containing *Virgin Coconut Oil* (VCO) with Piroxicam (1%) as a model has been undertaken. VCO concentration in the cream-base were made 0 %, 31%, 36% and 41% respectively to determine the influence of VCO concentration on the penetration profile of the drug. The profil of penetration was determined by using Franz diffusion cell (vertical type) with the mice's skin and pH 8 phosphate buffer as membrane and medium respectively. Concentration of piroxicam released was determined spectrophotometrically at wavelength 353.2 nm. Results indicated that the penetration profile of piroxicam from formula 1, 2 and 3 followed zero order kinetic with the slope (k) of 0.0171 ( $r = 0.9913$ ); 0.0217 ( $r = 0.9869$ ) and 0.0217 ( $r = 0.9939$ ) respectively, while that from formula 4 followed Higuchi equation with the slope (k) of 0,0570 mg/sec<sup>1/2</sup> ( $r = 0.9853$ ). The highest rate was observed from Formula 4 (VCO concentration was 41%). Statistical análisis showed that VCO affected the release of piroxicam from the formulation significantly ( $p < 0,01$ ).

Key words: Virgin Coconut Oil (VCO), penetrant enhancers, piroxicam